



DHEC's Office of Solid Waste Reduction and Recycling

For Your Information...

Obsolete + Electronics = E-Waste

Computers. Printers. Fax machines. Telephones. Microwave ovens. Televisions. Radios. VCRs. DVDs. CD players.

The list of electronic equipment that we buy, enjoy and throw away goes on and on. But we need to think about that again.



Discarded electronic equipment, also known as E-Waste, is one of the fastest growing waste streams because of growing sales and rapid obsolescence of these products. Take personal computers as an example. Computers have a useful life of three to five years. Currently, about 1.5 million computers enter the waste stream every year, according to the U.S. Environmental Protection Agency (U.S. EPA). By 2004, as many as 315 million obsolete computers could be disposed in a landfill. By 2005, most people will trade in their computer for newer models within two years of buying them.

There is, however, a problem beyond the mere number of electronic products being thrown away. Electronic equipment is one of the largest known sources of heavy metals and organic pollutants in the waste stream. Some experts estimate that since car batteries have been removed from the waste stream (in South Carolina, for example, car batteries have to be recycled – it's the law) that electronic equipment represents the largest remaining contributor of heavy metals to the solid waste stream.

Some electronic products – usually those with cathode ray tubes (CRTs), circuit boards, batteries and mercury switches – contain hazardous or toxic materials such as lead, mercury, cadmium, chromium and some types of flame-retardants. The glass screens or CRTs in computer monitors and televisions can contain as much as 27 percent lead. Although the lead is probably not an environmental problem while the monitor or television remains intact, the lead may leach out (leak) under typical conditions at a landfill.

Overall, there is concern, particularly at the local and state levels, that electronic products containing these hazardous materials may pose an environmental risk if they are not properly managed at their end-of-life.

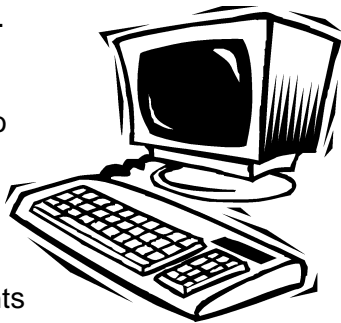
Giving electronic products a new lease on life...you can help.

Throwing away something should be the last option of solid waste management. Source reduction, that is making less garbage, is the most preferred option followed by recycling and composting and, then finally, disposal. Here are some recommendation for managing E-Waste:

- Encourage your local officials to set up a recycling program in your community.
- If your equipment is working, is there a non-profit organization or school district in your community that could use it?
- Consider upgrading or repairing instead of buying new.
- Purchasers who don't want the responsibility of dealing with the end-of-life equipment, but still prefer to use the most up-to-date products, should consider leasing instead of buying. This option allows purchasers to return old equipment to the vendor for upgrades or credit towards future purchases. Leasing also eliminates consumer responsibility for the proper product disposal or management because they do not own the equipment.
- Buy electronic products from a dealer or retailer or manufacturer that operates a take-back program and allows consumers to return old equipment when buying new products or system upgrades.

Extended Product Responsibility

But it's more than recycling. It's also about sustainability. Extended Product Responsibility (EPR) challenges each of us to reduce the life cycle environmental effects of products. It is a challenge that consumers, governments and the private sector must accept.



Some manufacturers and retailers already have accepted that challenge. Sony Electronics recently announced that it is setting up a take back and recycling program for Sony products in Minnesota. IBM offers a computer recycling service for consumers and small businesses. Gateway Country stores give discounts for new personal computers to individuals who donate working 386-class or better computers of any brand to Goodwill. Dell Computer Corporation is manufacturing a line of computers that are completely recyclable. Hewlett Packard has added design improvements that help with disassembly.

One campaign, "Take It Back" has been developed by several organizations to support EPR. Their objective is to encourage manufacturers assume financial responsibility for their products when they become obsolete. If this were the case, organizers believe that manufacturers would have an incentive to reduce cost by designing products that are reusable, repairable, upgradeable, recyclable and so on.

Recently, Massachusetts has formed the Product Stewardship Institute. The Institute, which is housed at the University of Massachusetts at Lowell, will assist Massachusetts and other states in promoting environmentally sound product management and design through coordinated, multi-stakeholder stewardship agreements negotiated with industry.

Currently, there are no electronic products recycling programs in South Carolina. The S.C. Department of Health and Environmental Control and the Recycling Market Development Advisory Council is currently working with the Product Stewardship Institute on this issue.

To learn more about the management of electronics, extended product responsibility and product stewardship, visit DHEC's Office of Solid Waste Reduction and Recycling Web site at www.scdhec.net/recycle or call 1-800-768-7348.

Web Sites for E-Waste Information

- The U.S. EPA's "WasteWise" program (www.epa.gov/wastewise)
- The National Recycling Coalition's Electronics Recycling Initiative (www.nrc-recycle.org/programs/electronics/index.htm)
- The National Safety Council's Electronic Product Recovery and Recycling Directory (www.nsc.org/ehc/epr2/recycler.htm).

DID YOU KNOW? Old electronic products probably are not worth what you think. Generally, the older an electronic product becomes, the more quickly its value fades.



Office of Solid Waste Reduction and Recycling
1-800-768-7348
www.scdhec.net/recycle

DHEC's Office of Solid Waste Reduction and Recycling FYIs provide general information on environmental topics. Readers are encouraged to reproduce this material. For more information about solid waste issues, please call 1-800-768-7348 or visit our Web site at www.scdhec.net/recycle. Please send written correspondence to: DHEC's Office of Solid Waste Reduction and Recycling, 2600 Bull Street, Columbia, SC 29201.